



# 제 30회 한국반도체학술대회

The 30th Korean Conference on Semiconductors

2023년 2월 13일(월)~ 15일(수) | 강원도 하이원리조트(그랜드호텔 컨벤션타워)

2023년 2월 14일(화), 10:55-12:40

Room F (스페이스 I, 6층)

## K. Memory (Design & Process Technology) 분과 [TF2-K] RRAM and Synapse Device II

좌장: 김윤 교수(서울시립대학교), 정연주 박사(KIST)

<p>TF2-K-1 10:55-11:10</p>	<p><b>NbO<sub>2</sub> Selector Device with Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub> Thermal Barrier for Low Off Current and Low Power Operation</b> Ohhyuk Kwon, Jangseop Lee, Kyumin Lee, Wooseok Choi, and Hyunsang Hwang POSTECH</p>
<p>TF2-K-2 11:10-11:25</p>	<p><b>A Study on Metal-oxide Based ECRAM Device Characteristics of Selector-free Cross-point Array for DNN</b> Jeonghoon Son, Seungkun Kim, and Seyoung Kim Department of Materials Science and Engineering, POSTECH</p>
<p>TF2-K-3 11:25-11:40</p>	<p><b>Demonstration of Analog Computing Using HfO<sub>x</sub>-Based 1T1M Array Device</b> Eun Young Kim, Woon Hyung Cheong, Myeong Chan Ko, and Kyung Min Kim KAIST</p>
<p>TF2-K-4 11:40-11:55</p>	<p><b>Self-Compliance Effects of the SiO<sub>x</sub>/SiN<sub>y</sub> Bilayer in Co CBRAM</b> Yeon-Joon Choi<sup>1,2</sup>, Tae-Hyeon Kim<sup>1,2</sup>, Kyungho Hong<sup>1,2</sup>, Sungjoon Kim<sup>1,2</sup>, Sungjun Kim<sup>3</sup>, and Woo Young Choi<sup>1,2</sup> <sup>1</sup>Department of Electrical and Computer Engineering, Seoul National University, <sup>2</sup>Inter-university Semiconductor Research Center, Seoul National University, <sup>3</sup>Division of Electronics and Electrical Engineering, Dongguk University</p>
<p>TF2-K-5 11:55-12:10</p>	<p><b>Optimization of Strong Physical Unclonable Function based on Passive Memristive Crossbar Array for Highly Reliable Operation</b> Jinwoo Park, Sangwook Youn, Kyu Ree Kim, Jungjin Lee, and Hyungjin Kim Department of Electrical and Computer Engineering, Inha University</p>
<p>TF2-K-6 12:10-12:25</p>	<p><b>Optimal Weight-Splitting in Resistive Random Access Memory-Based Computing-in-Memory Macros</b> Choong Seok Song and Doo Seok Jeong Division of Materials Science and Engineering, Hanyang University</p>
<p>TF2-K-7 12:25-12:40</p>	<p><b>RRAM Array with a Pristine Low Resistance State</b> Sungjoon Kim<sup>1,2</sup>, Kyungho Hong<sup>1,2</sup>, Tae-Hyeon Kim<sup>1,2</sup>, Yeon Joon Choi<sup>1,2</sup>, and Woo Young Choi<sup>1,2</sup> <sup>1</sup>Department of Electrical and Computer Engineering, Seoul National University, <sup>2</sup>Inter-university Semiconductor Research Center, Seoul National University</p>